gain performed in 7 months fattening period and slaughtering traits were recorded for 78 Marchigiana bulls. DNA was extracted from each meat sample and genotyped for the presence of the point mutation (g.874G > T) in MSTN exon 3 region by PCR-RFLP (wild type, mh + mh+; heterozygote, mh + mh-; homozygote, mh-mh-). Carcass weight and daily gain, pH at 45 min, and SEUROP classification were collected, and a sample cut (5th–6th thoracic vertebrae) of each left carcass side was dissected. Chemical (moisture, protein, fat and ash) and physical analyses (drip loss and colour by CIELab) were carried out on L. thoracis muscle according to official methodologies. Data were analysed with JMP software (ANOVA and ANCOVA, with appropriate covariates) to evaluate the effects of the MSTN mutation on the performance and quality traits. Out of 78 genotyped animals, 11 were heterozygotes, 67 wild types and none homozygote. An average carcass weight of the heterozygous greater than wild type animals (426.09 vs. 405.32 kg, $p > .05$) was observed, as well as a better dressing percentage (62.55 vs. 60.96%, $p > .05$), with more conformed carcasses (class E: 36.36%) and low grade of fat cover (class 2: 63.64 %). The low incidence of bone (9.44%), and a significant difference ($p < .05$) on the amount of muscular and fatty tissue were observed in the sample cut dissection of mh + mh- animals. Regarding meat quality, few significant differences were found between the two groups: a lower fat content (2.01 vs. 3.04%, $p < .05$) and a higher ashes content (1.26 vs. 1.15%, $p < .05$) in mh + mh- bulls. Even if differences between the two groups in the tricolorimetric parameters were not detected, lightness was slightly higher in heterozygous bulls characterised by a higher muscle glycolytic activity than not hypertrophic animals as reported by several authors. Despite the small size of the studied sample, the present results confirm good performance of the heterozygous animals producing healthy and lean meat, which meets the modern consumer's needs.

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How post-collection storage time can affect the semen freezability of Mediterranean trout?

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Semen cryobank plays a valuable role in biodiversity preservation of fish species at risk of extinction. According to the Italian freshwater fish Red list, the Mediterranean trout, *Salmo cettii*, is listed as critically endangered. In this regard, the 'Nat.Sal.Mo.' project aims to recover and conserve the native *S. cettii* populations of Molise rivers. The creation of a sperm cryobank is a project milestone, therefore the development of a semen cryopreservation protocol was an important goal to achieve. However, since the sampling sites in the project area are often not easily accessible, distant from each other and from the laboratory, the wide time that elapses between collection and processing of semen could negatively affect its freezability. In light of these considerations, two possible scenarios were developed to evaluate the effect of cool storage time intervals (1 h and 6 h) on both fresh and cryopreserved semen motility parameters and post-thawed fertilizing ability. Eggs and semen samples were collected by stripping. Each ejaculate ($n = 10$) was split into two aliquots and stored on ice for 1 h and 6 h. After each time interval, the sperm was diluted into a final extender concentration of 0.15 M glucose and 7.5% methanol and loaded into 0.25 mL plastic straws, and a final sperm concentration of 3.0×10^9 sperm/mL was obtained. After equilibration, the straws were frozen by exposure to liquid nitrogen (LN2) vapor 3 cm above the LN2 level for 5 min. The semen was thawed at 40 °C/5 s. Fresh and post-thawing sperm motility was evaluated by the CASA system. Fertilization trials were performed using three groups of eggs ($N \simeq 90$) inseminated with fresh sperm, and sperm frozen 1 and 6h post-collection. In fresh semen significant decreases ($p < .05$) from 1 to 6 h of storage were recorded for total motility (93.7 vs. 57.3%), movement duration (36.1 vs. 28.6 s) and beat cross frequency (6.4 vs. 4.6 Hz). When the sperm was frozen, only the total motility was significantly reduced ($p < .05$) from 1 to 6h (52.1% vs. 39.8%). No significant differences of fertilization rates (% eyed eggs) between the two storage times using frozen sperm (59.5% vs. 57.4%) were found. In conclusion, we showed that after 6 h of cool storage time post-collection, the post-thawing semen quality is preserved, and its fertilizing capacity is not compromised. However, the cool storage time significantly affects the freezability of fresh semen, eliminating the most cool-sensitive populations.

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Genetic parameters of predicted enteric methane emissions of Brown Swiss cattle at the population level in Italy

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The estimation of genetic parameters allows the establishment of genetic strategies to reduce the methane production impact